



SEQUENCE LISTING

<110> Chakravarti, Shukti
Case Western Reserve University

<120> Gene Expression Profiling of Inflammatory Bowel Disease

<130> 021825-004710US

<140> US 09/694,758
<141> 2000-10-23

<150> US 60/160,835
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<170> PatentIn Ver. 2.1

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<223> monocyte-derived neutrophil chemotactic factor
(MDNCF); interleukin 8 (IL-8) precursor; small
inducible cytokine, subfamily B, member 8 (SCYB8);
chemokine (C-X-C motif) ligand 8 (CXCL8)

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 motif) ligand 1 (CXCL1)

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(MDNCF); interleukin 8 (IL-8) precursor; small
inducible cytokine, subfamily B, member 8 (SCYB8);
chemokine (C-X-C motif) ligand 8 (CXCL8)

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 chemokine (C-C motif) ligand 4 (CCL4); activation
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 melanoma growth stimulatory activity gamma

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<213> Homo sapiens

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<223> macrophage inflammatory protein 1-beta (MIP-1beta)
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chemokine (C-C motif) ligand 4 (CCL4); activation
protein ACT-2 precursor; secreted protein G-26

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interleukin-1 beta precursor; catabolin

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<220>

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 <212> DNA
 <213> Homo sapiens

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 <223> interleukin-6 (IL-6) precursor; B-cell stimulatory
 factor 2 (BSF-2); hybridoma growth factor; CTL
 differentiation factor (CDF); interferon beta 2
 (IFNB2)

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 <212> DNA
 <213> Homo sapiens

<220>
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 variant 2 (GH2); hGH-V, hGH-V2

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<211> 2376

<212> DNA

<213> Homo sapiens

<220>

<223> hepatoma-derived growth factor (HDGF);
high-mobility group protein 1-like 2 (HMG-1L2)

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<210> 14
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 <212> DNA
 <213> Homo sapiens

<220>
 <223> neutrophil lipocalin (HNL); lipocalin 2 (LCN2);
 human neutrophil gelatinase-associated lipocalin
 (Hngal, NGAL); oncogene 24p3; 25 kDa
 alpha-2-microglobulin-related subunit of MMP-9

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<210> 15
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 <212> DNA
 <213> Homo sapiens

<220>
 <223> neutrophil lipocalin (HNL); lipocalin 2 (LCN2);
 human neutrophil gelatinase-associated lipocalin
 (Hngal, NGAL); oncogene 24p3; 25 kDa
 alpha-2-microglobulin-related subunit of MMP-9

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<213> Homo sapiens

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<223> nitric oxide synthase (NOS2); inducible nitric
oxide synthase (INOS)

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<210> 17
<211> 6004
<212> DNA
<213> Homo sapiens

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<220>
<223> mitochondrial superoxide dismutase (SOD2);
manganese-containing superoxide dismutase
(mangano-superoxide dismutase, MnSOD);
indophenoloxidase B (IPO-B)

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<223> n = g, a, c or t

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<400> 17

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 <211> 854
 <212> DNA
 <213> Homo sapiens

<220>
 <223> phospholipase A2, group IIA (PLA2G2A); rheumatoid
 arthritic synovial fluid phospholipase A2 (RASf-A
 PLA2); phosphatidylcholine 2-acylhydrolase;
 non-pancreatic secretory phospholipase A2 (NPS-PLA2)

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<210> 19
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 <212> DNA
 <213> Homo sapiens

<220>
 <223> serum amyloid A (SAA, SAA1); tumor protein p53
 inducible protein 4 (TP53I4, PIG4)

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<210> 20
 <211> 3460
 <212> DNA
 <213> Homo sapiens

<220>
 <223> serum amyloid A (SAA, SAA1); tumor protein p53
 inducible protein 4 (TP53I4, PIG4)

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<210> 21

<211> 748

<212> DNA

<213> Homo sapiens

<220>

<223> lysozyme (LYZ, LZM) precursor

<400> 21

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<210> 22
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 <212> DNA
 <213> Homo sapiens

<220>
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 xenobiotic monooxygenase

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 <211> 1653
 <212> DNA
 <213> Homo sapiens

<220>
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 non-selenium glutathione peroxidase (NSGPx);
 KIAA0106

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 <213> Homo sapiens

<220>
 <223> metallothionein

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 <212> DNA
 <213> Homo sapiens

<220>
 <223> metallothionein-IG (MT1G)

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<211> 3411

<212> DNA

<213> Homo sapiens

<220>

<223> regenerating islet-derived 1 beta (REG1B) precursor;
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precursor; secretory pancreatic stone protein 2;
pancreatic thread protein (PTP)

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<220>
 <223> regenerating islet-derived 1 alpha (REG1A) precursor;
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 precursor; secretory pancreatic stone protein (PSP, PSPS);
 pancreatic thread protein (PTP)

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<210> 28
 <211> 4497
 <212> DNA
 <213> Homo sapiens

<220>
 <223> pancreatitis-associated protein 1 (PAP, PAP1) precursor;
 regenerating islet-derived protein 3 alpha (REG3A,
 Reg III-alpha) precursor; hepatocarcinoma-intestine-pancreas
 (HIP); proliferation-inducing protein 34 (PIG34)

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 <213> Homo sapiens

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 <223> zinc finger protein 436 (ZNF436), DNA-binding
 protein; KIAA1710

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 <223> immunoglobulin G gamma 3 (IgG gamma 3, IGHG3)

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 <223> S100 calcium-binding protein A9 (S100A9);
 calgranulin B (CAGB); migration inhibitory
 factor-related protein 14 (MRP-14)

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 <212> DNA
 <213> Homo sapiens

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 <223> nicotinamide N-methyltransferase (NNMT)

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<212> DNA

<213> Homo sapiens

<220>

<223> lymphocyte G0/G1 switch regulatory protein 2
(GOS2)

<400> 33

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<210> 34

<211> 439

<212> DNA

<213> Homo sapiens

<220>

<223> S100 calcium-binding protein P (S100P);
migration-inducing gene 9

<400> 34

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<210> 35
 <211> 565
 <212> DNA
 <213> Homo sapiens

<220>

<223> annexin V, annexin 5, annexin A5 (ANX5, ANXA5); lipocortin V; endonexin II; anchorin CII; placental anticoagulant protein I (PAP-I); vascular anticoagulant-alpha (VAC-alpha); calphobindin; anticoagulant protein 4

<400> 35

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<210> 36
 <211> 3678
 <212> DNA
 <213> Homo sapiens

<220>

<223> hypoxia-inducible factor 1 alpha (HIF1A, HIF-1 alpha); basic-helix-loop-helix-PAS protein MOP1; ARNT interacting protein

<400> 36

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<210> 37

<211> 1910

<212> DNA

<213> Homo sapiens

<220>

<223> nuclear factor of interleukin 6 (NF-IL6);
interleukin 6-dependent DNA-binding protein;
transcription factor 5

<220>

<221> modified_base

<222> (1)..(1910)

<223> n = g, a, c or t

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<210> 38
<211> 774
<212> DNA
<213> Homo sapiens

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<220>
<223> suppressor of mif two 3 homolog 2 (SMT3H2, HSMT3)
precursor; MIF2 suppressor; small
ubiquitin-related modifier 2 (SUMO2); sentrin 2

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<220>
<221> modified_base
<222> (1)..(774)
<223> n = g, a, c or t

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<210> 39
 <211> 2841
 <212> DNA
 <213> Homo sapiens

<220>
 <223> SWI/SNF related, matrix-associated, actin dependent regulator of chromatin, subfamily d, member 1 (SMARCD1); SWI/SNF complex 60 kDa subunit A; chromatin remodeling complex BRG-1/Brm associated factor 60A (BAF60A); Swp73-like protein

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 <212> DNA
 <213> Homo sapiens

<220>
 <223> NF-kappa-B transcription factor p65 subunit
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 <213> Homo sapiens

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(intestinal) (KLF5, IKLF); similar to colon
Krueppel-like factor (CKLF); GC-box binding protein

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<213> Homo sapiens

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<213> Homo sapiens

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lipoprotein receptor; chromosome 19-cosmid R30879

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<210> 44
 <211> 1342
 <212> DNA
 <213> Homo sapiens

<220>
 <223> insulin-like growth factor binding protein 2
 (IGFBP-2; IBP-2) precursor

<400> 44
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 <211> 3839
 <212> DNA
 <213> Homo sapiens

<220>
 <223> zinc finger protein 91 (ZNF91); Krueppel related
 zinc finger protein; HTF10; HPF7

<400> 45
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<210> 46
 <211> 1381
 <212> DNA
 <213> Homo sapiens

<220>
 <223> general transcription factor IIIA (GTF3A)

<400> 46

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g						1381

<210> 47
 <211> 952
 <212> DNA
 <213> Homo sapiens

<220>
 <223> sorcin CP-22 (SRI); calcium binding protein
 amplified in multidrug-resistant cells

<400> 47

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<210> 48
 <211> 1360
 <212> DNA
 <213> Homo sapiens

<220>

<223> creatine kinase, brain, creatine kinase-B (CKB,
B-CK, CKBB)

<400> 48

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<210> 49

<211> 927

<212> DNA

<213> Homo sapiens

<220>

<223> epithelial protein up-regulated in carcinoma
(DD96); membrane associated protein 17 (MAP17);
PDZK1 interacting protein 1 (PDZK1IP1)

<400> 49

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<210> 50
 <211> 595
 <212> DNA
 <213> Homo sapiens

<220>

<223> calgizzarin; S100 calcium binding protein A11
 (S100A11); protein S100C; MLN 70

<400> 50

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<210> 51
 <211> 1433
 <212> DNA
 <213> Homo sapiens

<220>

<223> down-regulated in rhabdomyosarcoma LIM protein
 (DRAL); four and a half LIM domains protein 2
 (FHL-2); skeletal muscle LIM-protein 3 (SLIM 3);
 aging associated gene 11 (AAG11)

<400> 51

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<210> 52
 <211> 2416
 <212> DNA
 <213> Homo sapiens

<220>
 <223> MAX interacting protein 1 (MXI1); MAX interactor 1
 tumor suppressor; Max-related transcription
 factor; MAX dimerization protein 2

<400> 52
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<210> 53
 <211> 2881
 <212> DNA
 <213> Homo sapiens

<220>

<223> colon mucosa-associated down-regulated in adenoma
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(SLC26A3); chloride anion exchanger; congenital
chloride diarrhea

<400> 53

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 <213> Homo sapiens

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 <223> MHC class II HLA-DP light chain

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 <223> MHC class II HLA-DR beta 1 chain precursor
 (HLA-DRB4)

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<210> 56
 <211> 213
 <212> DNA
 <213> Homo sapiens

<220>
 <223> MHC HLA class II DG; HLA-DR gamma chain; CD74
 antigen

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<210> 57
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 <213> Homo sapiens

<220>
 <223> MHC HLA class II DR beta-1 chain (HLA-DRB1)

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aatgcctctg	gaataaaaca	tacaggagtc	tgtctctgct	atggcccatg	gggcatctct	5520
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tgatgatctt	gggtggaatt	tttggtgttt	aagccagttc	tttggttggc	gggtgggggt	5640
ggggagtcgg	tcctggggaa	tatatgtgat	cctttcccgg	taaaatatct	gaatgttgaa	5700
tttatcttat	aaattctaga	attc				5724

<210> 59

<211> 1100

<212> DNA

<213> Homo sapiens

<220>

<223> MHC HLA class II DM alpha chain-like (HLA-DMA);
RING6

<400> 59

ctaaagctgg	gttggtagct	cctacctact	gtgtggcaag	aaggtatggg	tcatgaacag	60
aaccaaggag	ctgcgctgct	acagatgtta	ccacttctgt	ggctgctacc	ccactcctgg	120
gccgtccctg	aagctcctac	tccaatgtgg	ccagatgacc	tgcaaaacca	cacattcctg	180
cacacagtgt	actgccagga	tgggagtccc	agtgtgggac	tctctgaggc	ctacgacgag	240
gaccagcttt	tcttcttcga	cttttcccag	aacactcggg	tgctcgcct	gcccgaattt	300
gctgactggg	ctcaggaaca	gggagatgct	cctgccattt	tatttgacaa	agagttctgc	360
gagtggatga	tccagcaaat	agggccaaaa	cttgatggga	aaatcccggg	gtccagaggg	420
tttcctatcg	ctgaagtgtt	cacgctgaag	cccctggagt	ttggcaagcc	caacactttg	480
gtctgttttg	tcagtaatct	cttcccaccc	atgctgacag	tgaactggca	cgatcattcc	540
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gccttttctt	acttaaaactt	cacaccagaa	ccttctgaca	ttttctcctg	cattgtgact	660
cacgaaattg	accgctacac	agcaattgcc	tattgggtac	cccggaacgc	actgccctca	720
gatctgctgg	agaatgtgct	gtgtggcgtg	gcctttggcc	tgggtgtgct	gggcatcatc	780
gtgggcattg	ttctcatcat	ctacttccgg	aagccttgct	caggtgactg	attcttccag	840
accagagttt	gatgccagca	gcttcggcca	tccaaacaga	ggatgctcag	atttctcaca	900
tcttgcctag	gatctcctct	taggtagaaa	gaagtcctctg	ggacatccct	ggggtgtgtg	960
tgtagatttc	ccacctgggg	actctgctgt	ccctgggctt	gcatcccagg	gatcccagag	1020
tggcctgcct	atcacaacca	catcccttcc	ccccacaagg	caataaatct	catttcttta	1080
aaaaaaaaaa	aaaaaaaaaa					1100

<210> 60

<211> 1763

<212> DNA

<213> Homo sapiens

<220>

<223> MHC HLA class II DR2-Dw12 DQw1-beta chain
(HLA-DRB2; HLA-Dw12)

<400> 60

gcactggact	gagaaccttc	accaaaaaaa	tgtctgcccc	gagacagatg	aggtccttca	60
gtccagtgct	tgattggttc	ttttccaaag	gccatcttaa	tcctaccacg	cacggaaata	120
tccacaggtt	tttattcttt	ctgccagcta	catcagatcc	atcaggtccg	agctgagttg	180
actaccacta	cttttccctt	tgtctcaatt	atgtcttggg	agaaggcttt	gcggatcccc	240

ggaggccttc	gggcaccaac	tgtgaccttg	atgctggcga	tgctgagcac	cccagtggct	300
gagggcagag	accctcccga	ggatttctgtg	ctccagttta	aggccatgtg	ctacttcacc	360
aatgggacgg	agcgcgtgcg	ttatgtgacc	agatacatct	ataaccgaga	ggaggacgtg	420
cgcttcgaca	gcgacgtggg	ggtgtatcgg	gcggtgacgg	cgcaggggcg	gcctgacgcc	480
gagtactgga	acagccagaa	ggacatcctg	gagaggaccc	gagcggagtt	ggacacgggtg	540
tgcagacaca	actacgaggt	ggcgttccgc	gggatcttgc	agaggagagt	ggagcccaca	600
gtgaccatct	ccccatccag	gacagaggcc	ctcaaccacc	acaacctgct	ggtctgctcg	660
gtgacagatt	tctatccagg	ccagatcaaa	gtccggtggt	ttcggaatga	ccaggaggag	720
acagctggcg	ttgtgtccac	cccccttatt	aggaaacggtg	actggacctt	ccagatcctg	780
gtgatgctgg	aaatgactcc	ccagcatgga	gacgtctaca	cctgccacgt	ggagcacccc	840
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atgctgagtg	gcattggagg	cttcgtgctg	gggctgatct	tcctcgggct	gggccttata	960
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ccaagggggt	tctgtttcta	ttctctcctc	agactgctca	agagaagcac	atgaaaaaca	1320
ttacctgact	ttagagcttt	tttacataat	taaacatgat	cctgagttaa	aaaaaaaaaa	1380
ggaaatcgct	gcagaatgaa	ggaatatccc	ttgaggtgac	ccagccaacc	tgtggccaga	1440
aggaggggtg	taccttgaaa	agaccactga	aagcattttg	gggtgtcaag	taaggggtgg	1500
cagaggaggt	agaaaaatcaa	ttcaattgtc	gcacattcca	tggttcttta	atattgatgc	1560
tcagtgcatt	ggccttagaa	tatcccagcc	tctctctctg	tttggtgagt	gctgtgtaag	1620
taagcatggt	agaattgttt	ggagacatat	atagtgatcc	ttggtcactg	gtgtttcaaa	1680
cattctggaa	agtcacatcg	atcaagaata	ttttttatct	ttaagaaagc	ataaccagca	1740
ataaaaatac	tattttttgag	tct				1763

<210> 61

<211> 1216

<212> DNA

<213> Homo sapiens

<220>

<223> MHC HLA class II DQw1.1 beta chain (HLA-DQB1)
precursor

<400> 61

ttttattctt	tctgccaggt	acatcagatc	catcaggtct	gagctgtggt	gactaccact	60
acttttccct	tcgtctcaat	tatgtcttgg	aagaagtctt	tgccgatccc	cggagacctt	120
cgggtagcaa	ctgtcacctt	gatgctggcg	atcctgagct	cctcactggc	tgagggcaga	180
gactctcccg	aggatttctg	gtaccagttt	aagggcctgt	gctacttcac	caacgggacg	240
gagcgcgtgc	ggggtgtgac	cagacacatc	tataaccgag	aggagtacgt	gcgcttcgac	300
agcgacgtgg	gggtgtaccg	ggcagtgcgc	ccgcaggggc	ggcctgttgc	cgagtactgg	360
aacagccaga	aggaagtcct	ggagggggcc	cgggcgtcgg	tggacagggt	gtgcagacac	420
aactacgagg	tggcgtagcg	cgggatcctg	cagaggagag	tggagcccac	agtgaccatc	480
tccccatcca	ggacagaggc	cctcaaccac	cacaacctgc	tgatctgctc	ggtgacagat	540
ttctatccaa	gccagatcaa	agtcgggtgg	tttcggaatg	atcaggagga	gacagccggc	600
gttgtgtcca	ccccctcat	taggaacggt	gactggacct	tccagatcct	ggtgatgctg	660
gaaatgactc	cccagcgtgg	agatgtctac	acctgccacg	tggagcacc	cagcctccag	720
agcccatcca	ccgtggagtg	gcgggctcag	tctgaatctg	cccagagcaa	gatgctgagt	780
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actcttctgt	gatgcctgct	tgtccctgcc	cagaattccc	agctgcctgt	gtcagcttgt	960
ccccctgaga	tcaaagtcct	acagtggctg	tcacgcaacc	accaggtcat	ctcctttcat	1020
ccccaccca	aggcgtgggc	tgtgactctg	cttcctgcac	tgacccagag	ccactgcctg	1080
tacatggcca	gctgcgtcta	ctcaggcccc	aaggggatcc	tgtttctggt	ctctcctcag	1140
actgctcaag	agaagcacat	gaaaaacatt	acctgacttc	agagcttttt	tacataatta	1200
aacatgatcc	tgagtt					1216

<210> 62
 <211> 915
 <212> DNA
 <213> Homo sapiens

<220>
 <223> rearranged immunoglobulin lambda light chain (Ig
 lambda)

<400> 62
 ctgatttgca tggatggact ctccccctct cagagtatga agagagggag agatctgggg 60
 gaagctcagc ttcagctgtg ggtagagaag acaggactca ggacaatctc cagcatggcc 120
 agcttccctc tctcctcac cctcctcact cactgtgcag ggtcctgggc ccagtctgtg 180
 ctgactcagc caccctcagc gtctgggacc cccgggcaga gggtcacat ctcttgttct 240
 ggaagccgct ccaacgtcgg aagtaataat gttaactggg accagcagct cccaggaacg 300
 gccccaaac tctcatcta tagtaataat cagcggccct caggggtccc tgaccgattc 360
 tctggctcca agtctggcac ctccagctcc ctggccatca gtgggctcca gtctgaggat 420
 gaggtgatt attactgtgc aacatgggat gacagtactg tgggtcttcgg cggagggacc 480
 aagctgaccg tcctgtgtca gcccaaggct gccccctcgg tcactctgtt ccgcccctcc 540
 tctgaggagc ttcaagccaa caaggccaca ctggtgtgtc tcataagtga cttctacccg 600
 ggagccgtga cagtggcctg gaaggcagat agcagccccg tcaaggcggg agtggagacc 660
 accacaccct ccaacaaaag caacaacaag tacgcggcca gcagctatct gagcctgacg 720
 cctgagcagt ggaagtccca cagaagctac agctgccagg tcacgcatga agggagcacc 780
 gtggagaaga cagtggcccc tacagaatgt tcataaggttc tcaaccctca cccccacca 840
 cgggagacta gagctgcagg atcccagggg aggggtctct cctcccacc caaggcatca 900
 agcccttctc cctgc 915

<210> 63
 <211> 527
 <212> DNA
 <213> Homo sapiens

<220>
 <223> immunoglobulin heavy chain (IgH), VDJRC region

<400> 63
 ttggggctgt gctgggtttt cctcggttct cttttaagag gtgtccagtg tcaggtgcag 60
 ctggtggagt ctgggggagg cgtggtccag cctgggaggt ccctgagact ctctgtgca 120
 gtctctggac tcacctttag tagctatggt atgcaactggg tccgccaggc tccaggcaag 180
 gggctgcagt ggggtggcagc tatatcatat gatggaagta ataaatacta cgcagactcc 240
 ttgaagggcc gattcaccat ctccagagac aattccaaga acacgctgta tctgcaaatg 300
 aacagcctga gatctgagga cacggctgtg tattactgtg cgagaggggc ggggattact 360
 gattttttgga gtggttatta cgtcaactgg ttcgaccctc ggggccaggg aaccctgggtc 420
 accgtctcct cagcttccac caagggccca tcgggtcttc ccctggcgcc ctgctccagg 480
 agcacctctg ggggcacagc ggccctgggc tgccctggta aggacta 527

<210> 64
 <211> 382
 <212> DNA
 <213> Homo sapiens

<220>
 <223> immunoglobulin lambda-like protein (IGLL2)

<400> 64
 ggtcagccca agactacccc gtcggtcatt ctgttctctc cgtcctgtga ggagccccaa 60
 gccacaagg ccacactggt gtgtctcatg aataacttta tccgggaatc ttgatggtga 120
 cctggaaggc agatgggtacc ctcacacccc agagcgtgga gaagaccacg cctccaaac 180
 agagcaacaa caagtacgtg gccagcagct acctgagcct gacgcccag cagtggaggt 240

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cccgcagaag ctacagctgc cagggttatgc aagaagggag caccgtggag aagtcagtgg 300
ccoctgcaga atgttcatag gttccagccc ccaccccacc acaggggcct ggagctgcag 360
gatcccaggg gaggggtctc tc                                     382

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<210> 65
<211> 1244
<212> DNA
<213> Homo sapiens

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<220>
<223> immunoglobulin rearranged gamma chain, V-J-C
      region

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```

<400> 65
atggaagccc cagctcagct tctcttctct ctgtactctt ggctcccaga taccaccgga 60
gaaattgtgt tgacacagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 120
ctctcctgca gggccagtca gagtgttggc agctacttag cctggtacca acagaaacct 180
ggccaggctc ccaggcccct catctatgat gcatccaaca gggccactgg catcccagcc 240
aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 300
gaagattttg cagtttatta ctgtcaacac cgtgacaatt ggcctccggg ggccactttc 360
ggcggagggg ccaaggtgga gatcaaact accaccggag aaattgtgtt gacacagtct 420
ccagccaccc tgtctttgtc tccaggggaa agagccaccc tctcctgcag ggccagtcag 480
agtgttggca gctacttagc ctggtaccaa cagaaacctg gccaggctcc caggcccctc 540
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gggacagact tcaactctac catcagcagc ctagagcctg aagattttgc agtttattac 660
tgtcaacacc gtgacaattg gcctccgggg gccactttcg gcggagggac caaggtggag 720
atcaaacgaa ctgtggctgc accatctgtc ttcactctcc cgccatctga tgagcagttg 780
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tccagcctga cccctcccca tcctttggcc tctgaccctt tttccacagg ggacctaccc 1140
ctattgcggt cctccagctc atctttcacc tcacccccct cctcctcctt ggctttaatt 1200
atgctaattg tggaggagaa tgaataaata aagtgaatct ttgc                                     1244

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```

<210> 66
<211> 454
<212> DNA
<213> Homo sapiens

```

```

<220>
<223> immunoglobulin rearranged kappa light chain,
      variable region

```

```

<400> 66
ctcagctcct ggggctcctg ctgctctggc tctcaggtgc cacatgtgac atccagatga 60
cccagtcctc atcctccctg tctgcatctg taggagacag agtcaccatc acttgccagg 120
cgactcagga cattggcaac tatttaaatt ggtatcagca caaaccaggg aaagccccta 180
acctcctgat ctacgatgca tccaatttgg aaacaggggt cccatcaagg ttcagtggac 240
gtggatctgg gacacatttt actttcacca tcagcagcct gcagcctgaa gatattgcaa 300
catattactg tcaacagtat ggtaatctcc cattcacttt cggccctggg accaaagtgc 360
atatcaaacg aactgtggct gcaccatctg tcttcatctt ccgcatctg atgagcagtt 420
gaaatctgga ctgcctctgt tgtgtgcctg ctga                                     454

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<210> 67
 <211> 676
 <212> DNA
 <213> Homo sapiens

<220>
 <223> MHC HLA class II Ia-associated invariant gamma
 chain; CD74 antigen

<400> 67
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 cctcccccct ctcccaccct gtacctcatc ccatgagacc ctggtgctg gctctttcgt 180
 cacccttggg caagacaaac caagtcggaa cagcagataa caatgcagca aggcctgct 240
 gcccaatctc catctgtcaa cagggcgctg aggtcccagg aagtggccaa aagctagaca 300
 gatccccgtt cctgacatca cagcagcctc caacacaagg ctccaagacc taggctcatg 360
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 tgctgactgt cctctcccct ccagcctttg gccttggctt ttctagccta tttacctgca 480
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 cacccataat cttttctgcc gaccctagt tccctctgct cagccaagct tggtatcagc 600
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 cttttctggt gagaga 676

<210> 68
 <211> 468
 <212> DNA
 <213> Homo sapiens

<220>
 <223> omega light chain protein 14.1, immunoglobulin
 lambda chain-like

<400> 68
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 ggaatcttga cggtgacctg gaaggcagat ggtaccccca tcaccagggt cgtggagatg 180
 accacgcctt ccaaacagag caacagcaag tacatggcca gcagctacct gagcctgacg 240
 cccgagcagt ggagggtccc cagaagctac agctgccagg tcatgcacga agggagcact 300
 gcagagaaga cggtggcccc tgcagaatgt tcataggttc ccagccccca gccacccac 360
 agggagcctg gagctgcagg atcccagggt aggggtctct ctcccctcc caagtcattc 420
 agcccttctc cctgcactca tgaacccca ataatatcc tcattgac 468

<210> 69
 <211> 2919
 <212> DNA
 <213> Homo sapiens

<220>
 <223> polymeric immunoglobulin receptor (poly-Ig
 receptor, PIGR) precursor; hepatocellular
 carcinoma-associated protein TB6; transmembrane
 secretory component (SC)

<400> 69
 agagtttcag ttttggcagc agcgtccagt gccctgccag tagctcctag agaggcaggg 60
 gttaccaact ggccagcagg ctgtgtccct gaagtcagat caacgggaga gaaggaagtg 120
 gctaaaacat tgcacaggag aagtcggcct gagtgggtgc gcgctcggga cccaccagca 180
 atgctgctct tcgtgctcac ctgctgctg gcgggtcttc cagccatctc cacgaagagt 240
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tactacccac	ccacctctgt	caaccggcac	acccggaagt	actggtgceg	gcagggagct	360
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tttgatgtca	gcctggaggt	cagccagggg	cctgggctcc	taaatgacac	taaagtctac	600
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aagaggaagt	ccttgtacaa	gcagataggc	ctgtaccctg	tgtgtgtcat	cgactccagt	720
ggttatgtga	atcccaacta	tacaggaaga	atacgcttg	atattcaggg	tactggccag	780
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cccagggaca	aggatggctc	attcagtgtg	gtgatcacag	gcctgaggaa	ggagatgca	1140
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gcctggcaac	tcttcgtcaa	tgaggagtcc	acgattcccc	gcagccccc	tgtggtgaag	1260
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agcgaggggt	gggttaaggc	ccagtacgag	ggccgcctct	ccctgctgga	ggagccaggc	1440
aacggcacct	tactgtcat	cctcaaccag	ctcaccagcc	gggacgccgg	cttctactgg	1500
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<211> 1799

<212> DNA

<213> Homo sapiens

<220>

<223> immunoglobulin alpha heavy chain allotype 2
constant region; IgA2 H chain C region (IGHA2)

<400> 70

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<210> 71

<211> 1151

<212> DNA

<213> Homo sapiens

<220>

<223> T-cell specific protein; T-cell receptor
beta-chain

<400> 71

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<210> 72
 <211> 1032
 <212> DNA
 <213> Homo sapiens

<220>
 <223> gamma-interferon-inducible protein precursor
 (IP30); contains gamma-interferon inducible
 lysosomal thiol reductase (GILT)

<400> 72
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<210> 73
 <211> 2709
 <212> DNA
 <213> Homo sapiens

<220>
 <223> interferon-gamma induced protein 16 (IFI16);
 interferon-inducible myeloid differentiation
 transcriptional activator

<400> 73
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<210> 74

<211> 483

<212> DNA

<213> Homo sapiens

<220>

<223> hepatitis C-associated microtubular aggregate protein p44

<400> 74

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<210> 75

<211> 634

<212> DNA

<213> Homo sapiens

<220>

<223> interferon-stimulated protein 15 kDa (ISG15); ISG15 ubiquitin-like modifier; ubiquitin cross-reactive protein (UCRP) precursor; interferon alpha-inducible protein (IFI-15K); interferon-induced 17 kDa protein precursor

<400> 75
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<210> 76
 <211> 1451
 <212> DNA
 <213> Homo sapiens

<220>
 <223> interleukin 2 receptor gamma subunit chain (IL2RG,
 hIL-2Rg) precursor; cytokine receptor common gamma
 chain (gamma-C) precursor; CD132 antigen; p64

<400> 76
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<210> 77
 <211> 1071
 <212> DNA
 <213> Homo sapiens

<220>
 <223> complement factor D (DF) precursor; adipsin; C3
 convertase activator; properdin factor D

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<400> 77
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<210> 78
<211> 1192
<212> DNA
<213> Homo sapiens

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<220>
<223> CD9 antigen; leukocyte antigen MIC3;
motility-related protein-1 (MRP-1); tetraspanin-29
(Tspan-29)

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<213> Homo sapiens

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<220>

<223> defensin 5 (DEF5) preproprotein; defensin alpha 5
(DEFA5); paneth cell-specific alpha-defensin 5

<400> 79

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<211> 3060

<212> DNA

<213> Homo sapiens

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<223> defensin 6 (DEF6, HD-6) preproprotein; defensin
alpha 6 (DEFA6) precursor; paneth cell-specific
alpha-defensin 6

<400> 80

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 precursor; macrophage elastase (ME)

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 <213> Homo sapiens

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 gelatinase; type IV collagenase (CLG4A)

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<210> 84

<211> 1801

<212> DNA

<213> Homo sapiens

<220>

<223> matrix metalloproteinase 3 (MMP-3) preproprotein;
stromelysin 1 (SL-1) precursor, preprostromelysin;
proteoglycanase; progelatinase; transin-1

<400> 84

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<210> 85
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 <212> DNA
 <213> Homo sapiens

<220>
 <223> elastase-specific inhibitor (ESI); elafin precursor; protease inhibitor 3 (PI3), skin derived (SKALP); skin-derived anti-leukoproteinase; whey acidic protein (WAP) four-disulfide core domain protein 14; protease inhibitor WAP3

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 <222> (2255)..(2256)
 <223> n = g, a, c or t

<400> 85
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<210> 86
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 <212> DNA
 <213> Homo sapiens

<220>
 <223> collagen, type I, alpha2; collagen alpha 2(I)
 chain precursor; prepro-alpha2(I) collagen
 (COL1A2)

<220>
 <221> modified_base
 <222> (1)..(5086)
 <223> n = g, a, c or t

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 <212> DNA
 <213> Homo sapiens

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 chain; collagen alpha 3(VI) chain precursor
 (COL6A3)

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 <212> DNA
 <213> Homo sapiens

<220>

<220>

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 collagen alpha-1 (I) chain precursor; collagen I,
 alpha-1 preproprotein; prepro-alpha1(I) collagen
 (COL1A1)

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<213> Homo sapiens

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      collagen (COL3A1); Ehlers-Danios syndrome type IV;
      fetal collagen

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<210> 90

<211> 1585

<212> DNA

<213> Homo sapiens

<220>

<223> collagen alpha-2(VI) chain precursor; collagen VI
alpha-2; alpha-2 type VI collagen; type VI
collagen alpha 2 chain precursor (COL6A2)

<400> 90

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<210> 91

<211> 2212

<212> DNA

<213> Homo sapiens

<220>

<223> collagen alpha-2(IV) chain precursor; alpha-2 type
IV collagen; type IV collagen alpha (2) chain;
(COL4A2); procollagen; basement membrane collagen

<400> 91

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<210> 92

<211> 1830

<212> DNA

<213> Homo sapiens

<220>

<223> mucin 4; tracheo-bronchial mucin (MUC4)

<400> 92

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<210> 93

<211> 490

<212> DNA

<213> Homo sapiens

<220>

<223> trefoil factor 1 (TFF1) precursor; gastrointestinal trefoil protein pS2; pS2 protein precursor; protein NR-2/pS2; estrogen-regulated protein pNR-2; breast cancer estrogen inducible sequence (BCE1, BCE I); HP1.A

<400> 93
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<210> 94
<211> 229
<212> DNA
<213> Homo sapiens

<220>
<223> intestinal mucin

<400> 94
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caaccccaac acccaccggc acacagaccc caagatcgac acccatcac 229

<210> 95
<211> 2133
<212> DNA
<213> Homo sapiens

<220>
<223> osteonectin precursor; secreted protein, acidic,
cysteine rich (SPARC); basement-membrane protein
40 (BM-40); extracellular matrix protein BM-40

<400> 95
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<210> 96
<211> 1182
<212> DNA
<213> Homo sapiens

<220>
<223> proteoglycan 1 (PRG1); hematopoietic proteoglycan core protein;
secretory granule proteoglycan core protein precursor;
serglycin (SRGN) precursor; proteoglycan secretory granule 1;
HL-60 cell proteoglycan peptide core; platelet proteoglycan

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<210> 97
<211> 1806
<212> DNA
<213> Homo sapiens

<220>
<223> peripheral myelin protein 22 (PMP22); growth
arrest-specific 3 (GAS-3); SR13 protein;
PAS-II/SR13/Gas-3

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 migration-stimulating factor

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 <212> DNA
 <213> Homo sapiens

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 RGD-containing collagen-associated protein
 (RGD-CAP); ig-h3, beta ig.h3

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(fasciclin-I-like); periostin (PN, POSTN);
periodontal ligament-specific periostin

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coagulation factor VIII (F8VWF)

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<212> DNA

<213> Homo sapiens

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<211> 2597

<212> DNA

<213> Homo sapiens

<220>

<223> adducin 2 (ADD2); adducin 2 (beta); beta adducin;
beta adducin 2; rabphilin-3A-interacting protein

<400> 104

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 <213> Homo sapiens

<220>
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<220>
 <223> adipose specific collagen-like 2; adipose specific
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 transcript 2 (APM2, apM2); adipose specific 2;
 GS2374

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 cytoskeletal (KRT20, K20); keratin, type I
 cytoskeletal 20; protein IT

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<211> 105

<212> DNA

<213> Homo sapiens

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 <212> DNA
 <213> Homo sapiens

<220>
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 fructose-bisphosphatase; fructose-1,6-bisphosphate
 aldolase; fructose-1,6-bisphosphate
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 <213> Homo sapiens

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 glicentin-related polypeptide (GRPP);
 oxyntomodulin (OXY, OXM)

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<211> 2578

<212> DNA

<213> Homo sapiens

<220>

<223> monocarboxylate transporter 1 (MCT1); solute carrier, family 16, member 1 (SLC16A1)

<400> 111

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<210> 112

<211> 4122

<212> DNA

<213> Homo sapiens

<220>

<223> 2-oxoglutarate dehydrogenase (OGDH) precursor; 2-oxoglutarate
 dehydrogenase E1 component, mitochondrial precursor;
 alpha-ketoglutarate dehydrogenase; oxoglutarate
 (alpha-ketoglutarate) dehydrogenase (lipoamide)

<400> 112

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<210> 113

<211> 1450

<212> DNA

<213> Homo sapiens

<220>

<223> alcohol dehydrogenase 1A (ADH1A, ADH1); class I
alcohol dehydrogenase alpha subunit (aADH);
aldehyde reductase

<400> 113

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<210> 114
<211> 1523
<212> DNA
<213> Homo sapiens

<220>
<223> carbonic anhydrase II (CA2, CA II); carbonic
anhydrase B; carbonic dehydratase; carbonate
dehydratase II

<400> 114
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<210> 115
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<223> carbonic anhydrase IV (CA4, CA-IV) precursor;
carbonic dehydratase; carbonate dehydratase IV;
retinitis pigmentosa 17 (autosomal dominant)

<400> 115
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<210> 116

<211> 2657

<212> DNA

<213> Homo sapiens

<220>

<223> phosphoenolpyruvate carboxykinase 1, soluble
(PCK1, PEPCK)

<400> 116

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 (placental)

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 protein 1 (TCP1), subunit 6A; chaperonin containing TCP1, zeta
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 morphine dependence related protein 2; TRiC chaperonin subunit

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<211> 8447

<212> DNA

<213> Homo sapiens

<220>

<223> sulfotransferase family, cytosolic, 1A, phenol-preferring, member 3 (SULT1A3, ST1A3); thermolabile phenol sulfotransferase (STM); catecholamine-sulfating phenol sulfotransferase; placental estrogen sulfotransferase (EST); aryl sulfotransferase

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 <211> 2191
 <212> DNA
 <213> Homo sapiens

<220>
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 glucuronosohydrolase; glucuronohydrolase; beta-G1

<400> 121
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<210> 122

<211> 2090

<212> DNA

<213> Homo sapiens

<220>

<223> UDP-glucuronosyltransferase 2 family, protein B15 (UGT2B15, UDPGT) precursor; UDP-glucuronosyltransferase 2B8 (UGT2B8) precursor, microsomal (estriol-specific); dihydrotestosterone/ androstanediol UDP-glucuronosyltransferase isoform 3 (UDPGTh-3)

<400> 122

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<210> 123

<211> 1137

<212> DNA

<213> Homo sapiens

<220>

<223> thiosulfate sulfurtransferase (TST);
thiosulfate:cyanide sulfurtransferase; thiosulfate
cyanide transsulfurase; thiosulfate
thiotransferase; rhodanese

<400> 123

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<210> 124

<211> 3494

<212> DNA

<213> Homo sapiens

<220>

<223> aminopeptidase N (ANPEP, PEPN, APN) precursor; membrane alanine
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microsomal aminopeptidase; aminopeptidase M; CD13 antigen;
p150; IGF1R

<400> 124

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<210> 125
 <211> 1815
 <212> DNA
 <213> Homo sapiens

<220>
 <223> protective protein for beta-galactosidase (PPGB,
 PPR) precursor; beta-galactosidase 2;
 carboxypeptidase C precursor; lysosomal protective
 protein; cathepsin A precursor

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<210> 126
 <211> 584
 <212> DNA
 <213> Homo sapiens

<220>

<223> fatty acid binding protein 6 (FABP6); gastropin
(GT) isoform 1; ileal lipid-binding protein (ILBP,
Il1bp); ileal bile acid binding protein (I-BABP);
intestinal 15 kDa protein (I-15P)

<400> 126

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<210> 127

<211> 634

<212> DNA

<213> Homo sapiens

<220>

<223> fatty acid binding protein 4, adipocyte (FABP4);
adipocyte lipid-binding protein (ALBP); aP2, p15

<400> 127

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<210> 128

<211> 489

<212> DNA

<213> Homo sapiens

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<223> fatty acid binding protein 1, liver (FABP1, FABP2,
L-FABP); fatty acid binding protein, hepatic; Z
protein; sterol carrier protein

<400> 128

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<212> DNA
<213> Homo sapiens

<220>
<223> delta3, delta2-CoA-isomerase (DCI);
delta(3)-delta(2)-enoyl-CoA isomerase;
dodecenoyl-CoA delta-isomerase precursor,
mitochondrial; 3,2-trans-enoyl-CoA isomerase

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<210> 130
<211> 1584
<212> DNA
<213> Homo sapiens

<220>
<223> acetyl-CoA acyltransferase 2 (ACAA2);
mitochondrial 3-oxoacyl-CoA thiolase;
3-ketoacyl-CoA thiolase, mitochondrial;
beta-ketothiolase; T1

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<210> 131

<211> 9127

<212> DNA

<213> Homo sapiens

<220>

<223> 3-beta hydroxysteroid dehydrogenase type II (HSD3B2);
5delta-4delta isomerase; 3-beta isomerase 2; hydroxy-delta-5
steroid dehydrogenase; steroid delta-isomerase 2; 3beta-hydroxy
delta5-steroid dehydrogenase multifunctional protein II

<400> 131

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 precursor; acetyl-CoA acetyltransferase 1 (ACAT1)
 precursor; T2

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<211> 1344

<212> DNA

<213> Homo sapiens

<220>

<223> hydroxysteroid (17-beta) dehydrogenase 2 (HSD17B2); 17 beta hydroxysteroid dehydrogenase type 2 (17b-HSD); 17beta-estradiol dehydrogenase; estradiol 17beta dehydrogenase type 2; 20alpha-hydroxysteroid dehydrogenase

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<210> 135

<211> 1897

<212> DNA

<213> Homo sapiens

<220>

<223> 11-beta-hydroxysteroid dehydrogenase type II
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11-beta-dehydrogenase, isozyme 2; NAD-dependent
11-beta-hydroxysteroid dehydrogenase

<400> 135

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<210> 136

<211> 511

<212> DNA

<213> Homo sapiens

<220>

<223> MAT8 protein; FXD domain containing ion transport
regulator 3 (FXD3) precursor; chloride
conductance inducer Mat-8; phospholipase-like
protein

<220>

<221> modified_base

<222> (511)

<223> n = g, a, c or t

<400> 136

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<210> 137

<211> 571

<212> DNA

<213> Homo sapiens

<220>

<223> guanylate cyclase activator 2A (GUCA2A); guanylate cyclase activating protein 1 (Gap-I); guanylin 2, intestinal, heat-stable; guanylin precursor; proguanylin

<400> 137

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<210> 138

<211> 755

<212> DNA

<213> Homo sapiens

<220>

<223> 6-pyruvoyl-tetrahydropterin synthase (PTPS, PTS); PTP synthase

<400> 138

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<210> 139

<211> 3727

<212> DNA

<213> Homo sapiens

<220>

<223> KIAA0035; similar to rat nucleolar phosphoprotein
of 140 kD (RATNOP140B), nucleolar and coiled body
phosphoprotein 1 (NOLC1), nucleolar phosphoprotein
p130; trans-regulated protein 13; HCV NS5A

<400> 139

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<210> 140

<211> 5654

<212> DNA

<213> Homo sapiens

<220>

<223> KIAA0367; BNIP2 motif containing molecule at
carboxyl terminal region (BMCC1)

<400> 140

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 <211> 1144
 <212> DNA
 <213> Homo sapiens

<220>
 <223> endogenous retrovirus envelope region; pseudo-env;
 PL1

<400> 141

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cttt						1144

<210> 142
 <211> 494
 <212> DNA
 <213> Homo sapiens

<220>
 <223> cytochrome c oxidase subunit Vb, mitochondrial
 precursor; cytochrome c oxidase subunit 5B (COX5B)

<400> 142

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agggaagacc	ctaatttagt	cccctccatc	tccaacaaga	gaatagtagg	ctgcatctgt	300
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tggctccttc	tccc					494

<210> 143
 <211> 1620
 <212> DNA
 <213> Homo sapiens

<220>
 <223> pancreatic ribonuclease A precursor; ribonuclease,
 RNase A family, 1 (pancreatic) (RNASE1, RNS1,
 RNase A, RNase 1); ribonuclease HK-2A;
 ribonuclease, secretory; HP-RNase; RNase UPI-1;
 RIB1

<400> 143

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<210> 144

<211> 2000

<212> DNA

<213> Homo sapiens

<220>

<223> K12 protein precursor; secreted and transmembrane
protein 1 (SECTM1) precursor

<400> 144

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<210> 145

<211> 121

<212> DNA

<213> Homo sapiens

<220>

<223> clone E18 from CpG-enriched DNA

<400> 145

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a                                                    121

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